A/N 14486 Repres W/Z

Paper presented at the International Conference on Transboundary Protected Areas as a Vehicle for International Co-operation, 16-18 September 1997, Somerset West, South Africa

Status of the World's Transfrontier Protected Areas

Dorothy C. Zbicz, Duke University Nicholas School of the Environment, Box 90328, Durham, NC 27511, USA

anc

Michael J. B. Green, World Conservation Monitoring Centre 219 Huntingdon Road, Cambridge CB3 0DL, U.K.

1. INTRODUCTION

Protected areas that adjoin across international boundaries, referred to in this paper as *transfrontier* protected areas, provide intriguing possibilities for promoting biodiversity conservation across politically-severed ecosystems and species' home ranges, as well as transfrontier collaborative management which may ultimately contribute to international peace. Since 1932, when Waterton/Glacier was jointly declared the first *international peace park* by Canada and the United States of America, the concept has gained increasingly widespread recognition and application, particularly in the last decade.

The first review of transfrontier protected areas was presented to the Border Parks Workshop held in 1988 during the First Global Conference on *Tourism - A Vital Force for Peace*. A total of 70 cases involving 68 countries was identified where established or proposed protected areas met across international boundaries. (Thorsell and Harrison, 1990). The purpose of this paper is to examine progress since the 1988 Border Parks Workshop and assess the present extent of transfrontier protected areas. No attempt is made here to examine the level of collaborative management between protected areas that abut on international boundaries; this is the subject of ongoing research by the first author, for which the identification of all transfrontier protected areas in the world was the necessary first stage.

2. METHODOLOGY

The process of compiling a comprehensive list of transfrontier protected areas began three years ago with the list of *border parks* compiled by Thorsell and Harrison (1990). The list was updated with other information from various sources and from the many individuals at Duke University working in protected areas around the world. Further input was provided by protected area professionals attending the 1996 IUCN World Conservation Congress in Montreal. In the spring of 1997, the first author spent several weeks at the World Conservation Monitoring Centre (WCMC) in Cambridge, UK working with staff to verify this compiled list with the Centre's Protected Areas Database and its Biodiversity Map Library, an ARC.INFO-based Geographic Information System. She then took the list to IUCN Headquarters, Switzerland where, due to fortunate timing, she was also able to solicit feedback from the World Commission on Protected Areas Steering Committee, including its vice chairs from the different regions of the world. Finally, the list was verified by hundreds of protected area managers around the world, through electronic mail, fax and mail.

The following criteria were used for listing complexes of transfrontier protected areas:

· sites must adjoin across one or more international boundaries; and

• sites must qualify as protected areas, based on the IUCN (1994) definition¹. Such sites are assigned to one of six IUCN protected area management categories (I-VI).

Most of the identified transfrontier protected areas are actually part of larger conglomerates of protected areas, referred to in this paper as *transfrontier protected areas complexes*. This concept of complexes is useful for determining the area of contiguous habitat that is protected. Since each complex usually contains more than two protected areas, the total number of individual protected areas is much more than double the number of complexes. It should be noted, however, that not all protected areas within a complex necessarily adjoin an international boundary.

Transfrontier protected areas complexes were mapped using WCMC's Biodiversity Map Library. In the absence of digitized information for the boundaries of some protected areas, their locations were marked by a single georeferenced point. It was not possible to map all transfrontier protected areas due to a lack of both digital and georeferenced data in some cases.

Potential transfrontier protected areas were also identified on the basis of established protected areas adjoining proposed protected areas across an international boundary. This list of potential transfrontier protected areas is likely to be incomplete as data on proposed protected areas are much less comprehensive than data for established protected areas. For this reason the list is not presented here, but summary data derived from it are used to indicate the scale of future opportunities for promoting the international peace park concept.

3. STATUS OF TRANSFRONTIER PROTECTED AREAS COMPLEXES

3.1 Extent

A total of 136 transfrontier protected areas complexes were identified (Annex 1). These are distributed among 98 countries and comprise 406 individual protected areas. The total number of legally designated areas is higher (482) because a number of these have not been assigned to IUCN categories for various reasons. As shown in the accompanying maps, it has been possible to map 382 of the 406 protected areas, based on their digitized boundaries or known geographic coordinates. From the available information, we know that transfrontier protected areas complexes cover at least 1,127,934 km², this being the total area of the 382 protected areas (Table 1). Such complexes represent nearly 10% of the world's network of 13.2 million km² of protected areas or nearly 1% of the total area of all countries in the world (Green and Paine, in press). This highlights the global significance of transfrontier protected areas complexes in terms of their extensiveness, quite apart from their potential importance for collaborative management across international boundaries and ultimately for contributing to international peace.

Table 1 Summary of available information on mapped transfrontier protected areas complexes

Transfrontier protected areas complexes	Point locations (i.e. geographic coordinates)	Polygons (i.e. digitized boundaries)	Total
No. protected areas	142	240	382
Total area (km²)	226,124	901,810	1,127,934
No. countries	53	64	98

A further 85 potential transfrontier protected areas complexes were identified. These are distributed among 14 countries additional to the 98 with established complexes. Potential transfrontier protected areas complexes have not been listed or mapped.

¹ A protected area is an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means (IUCN, 1994).

3.2 Growth

Comparison with the first survey by Thorsell and Harrison (1990) shows that there has been tremendous growth in the number of transfrontier protected areas complexes since 1988, particularly over the last three years. The number of complexes comprising established transfrontier protected areas has more than doubled, from 59 to 136. Furthermore, the number of complexes straddling the boundaries of three countries has increased from two in 1988 to 23 in 1997, with a further seven potential complexes identified. In one case, the proposed Mura-Drava complex, four countries (Austria, Croatia, Hungary and Slovenia) are involved. While some of this growth reflects changing political situations, as with the emergence of the Newly Independent States from the former Soviet Union, much of it represents genuine efforts to establish a common agenda for conserving biological diversity that straddles international boundaries.

Table 2	Regional growth of transfrontier	protected areas	complexes since 1988
I able 2	Regional growth of transfrontier	protected areas	complexes since 1700

Regions	No. cor	nplexes	No. protected areas	No. proposed complexes		No. complexes with three countries
	1988	1997	1997	1988	1997	1997
N. America	5	8	37	0	4	0
C. & S. America	7	25	79	0	15	5
Europe	20	44	121	3	41	6 .
Africa	20	33	100	2	13	. 9
Asia	7	26	69	6	12	3
TOTAL	59	136	406	11	85	23

The regional distribution of transfrontier protected areas complexes is summarised in Table 2 for 1988 and 1997. In general, such complexes are distributed fairly evenly throughout the different regions, becoming more evenly spread during the last decade due to an increase in the percentage of complexes in Central and South America (Figure 1). The increase in Central and South America partly reflects the establishment of several transfrontier protected areas since the cessation of armed conflicts in the region. While North America contains only 6% of the world's total number of complexes, it should be appreciated that these occur along only two international boundaries.

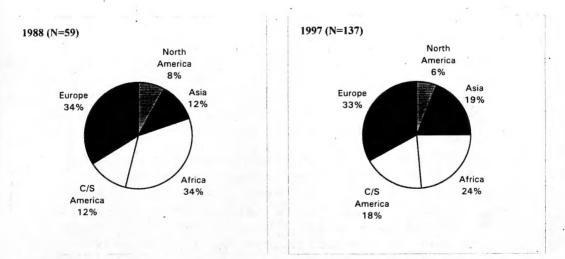


Figure 1 Regional distribution of transfrontier protected areas complexes in 1988 and 1997

3.3 International boundaries

As considered in Section 3.1, 98 countries have transfrontier protected areas complexes, which represents nearly half of the 224 countries and dependent territories in the world. The International Boundaries Research Unit, University of Durham, UK, maintains a global database of international boundaries, which includes at present 309 international boundaries (M. Pratt, pers. comm., 1997). Some 112 (36%) of these international boundaries have transfrontier protected areas complexes located along them and an additional 47 international boundaries contain potential complexes. It should be noted that there is not a 1:1 ratio between international boundaries and complexes. There are 23 complexes involving three countries and, therefore, three international boundaries. Conversely, 38 of the 112 international boundaries are straddled by more than one protected areas complex (24 have two complexes, nine have three, three have four and two have five complexes).

The regional distribution of existing and potential transfrontier protected areas complexes with respect to international boundaries is shown in Table 3. The number of international land boundaries has increased considerably in recent decades, from about 280 in the late 1980s to some 315 in 1997 (Blake, these proceedings), leading to increased opportunities for transfrontier protected areas complexes. In Europe, for example, the number of such complexes has doubled since 1988 (Table 2), partly due to the increased number of boundaries resulting from dissolution of the former USSR in 1991. Moreover, most of the proposed complexes in Europe (Table 3) lie along these new political boundaries in former eastern Europe or USSR.

Table 3 Regional distribution of protected areas complexes straddling international boundaries

Region	Number of international boundaries with:					
	1 transfrontier protected areas complex	1 potential transfrontier protected areas complex*	> 1 transfrontier protected areas complex			
N. America	2	1	2			
C. & S. America	21	6	8			
Europe	33	28	12			
Africa	34	9	11			
Asia	22	3	5			
TOTAL	112	47	38			

^{*} Not included in Column 2

4. PARKS FOR PEACE

Some 136 cases exist around the world where the boundaries of two or more contiguous protected areas straddle 112 international boundaries. These transfrontier protected areas complexes provide real opportunities for co-operative management across international boundaries in the interests of biodiversity conservation. In the broader political framework, such cooperation contributes to political stability between neighbouring countries.

In a 1991 article from the *Journal of Peace Research*, Brock concluded that although peace parks to date had probably had little independent effect on international relations, transfrontier environmental cooperation has the potential to develop into an independent variable influencing world politics. Experience in Europe during the past twenty years has demonstrated the important role of cooperative resource management at the local, transfrontier level in leading to greater European economic, social and political integration. Brock (1991) suggests that environmental cooperation may have a direct effect on regional politics by helping to internalize norms, establish regional identities and interests, operationalize routine international communication, and marginalize the acceptability of the use of force. Simply establishing international peace parks is

unlikely to bring an end to border hostilities, but such initiatives may help to promote communication and cooperation as an early part of the peace process, building confidence and ultimately improving transfrontier relations. Where transfrontier relations are already cordial, they can be enhanced by focusing on biodiversity conservation objectives within adjoining protected areas.

In the past decade, many countries have begun to explore the potential for promoting transfrontier protected areas as models of international cooperation. Examples include: Laos/Cambodia/Thailand, Ecuador/Peru, La Amistad between Costa Rica and Panama, Sí-a-Paz between Costa Rica and Nicaragua, Turkey/Greece, Bosnia/ Serbia-Montenegro, Papua New Guinea/ Indonesia, Jordan/ Israel, South Africa/ Mozambique and the demilitarized zone between North and South Korea. The extent to which transfrontier protected areas may serve the twin objectives of conserving biodiversity and promoting peace across international boundaries was the subject of a conference in 1993 (Westing, 1993). At a more recent workshop in 1995, the experience gained by managers from transfrontier mountain protected areas was reviewed, and common elements for effective transfrontier cooperation identified (Hamilton *et al.*, 1996).

In many more cases, however, the extent of transfrontier cooperation between adjoining protected areas has not yet been examined on a global scale. The next step is to assess the levels of cooperation that exist within existing transfrontier protected areas complexes. This is already underway by the first author by means of a questionnaire survey involving managers of all transfrontier protected areas in the world. This survey will provide the basis for identifying the conditions under which transfrontier cooperation is practicable and the factors which are most likely to encourage or inhibit it.

REFERENCES

- Blake, G.H. (these proceedings). The geopolitics of transboundary cooperation: an overview.
- Brock, L. (1991). "Peace through Parks: The Environment on the Peace Research Agenda." *Journal of Peace Research* 28(4): 407-423
- Green, M.J.B. and Paine, J. (in press). State of the World's Protected Areas at the End of the Twentieth Century. In: Protected Areas in the 21st Century: from Islands to Networks, World Commission on Protected Areas. IUCN, Gland, Switzerland and Cambridge, UK.
- Hamilton, L. S., Mackay, J. C., Worboys, G. L., Jones, R. A. and Manson, G. B. (Ed.) (1996). *Transborder Protected Area Cooperation*. Canberra, Australia, Australian Alps National Parks and IUCN.
- IUCN (1994). Guidelines for Protected Area Management Categories. Commission on National Parks and Protected Areas with the assistance of the World Conservation Monitoring Centre. IUCN, Gland, Switzerland and Cambridge, UK. x + 261pp.
- Pratt, M. (1997). Electronic mail list-serve "int-boundaries", 17 October 1997. International Boundaries Research Unit, University of Durham, Durham, UK.
- Thorsell, J. and Harrison, J. (1990). Parks That Promote Peace: A Global Inventory of Transfrontier Nature Reserves. *Parks on the Borderline: Experience in Transfrontier Conservation*. J. Thorsell (Ed.). IUCN, Gland, Switzerland and Cambridge, UK. Pp. 4-21.
- Westing, A. H. (1993). Building Confidence with Transfrontier Reserves: The Global Potential. *Transfrontier Reserves for Peace and Nature: A Contribution to Human Security*. A. H. Westing. (Ed.). UNEP, Nairobi, Pp. 1-15.

ACKNOWLEDGEMENTS

We gratefully acknowledge the hundreds of protected area managers who obligingly responded to requests for information on transfrontier protected areas. Members of the WCMC Protected Areas Unit, namely James Paine, Samuel Kanyamibwa, Isabel Ripa Juliá, Javier Beltrán and Balzhan Zhimbiev, contributed their knowledge and expertise. Vicky Fletcher and Oliver Jarratt matched listed transfrontier protected areas with database records, Simon Blyth ably prepared a poster map for this Conference at very short notice, and Victoria Freeman provided secretarial and other support. Members of the Protected Areas Programme at IUCN Headquarters shared their expertise and provided various support, which is greatly appreciated. The study has also benefited from the comments and suggestions of the World Commission on Protected Areas Steering Committee, numerous researchers at Duke University, and many participants at the IUCN World Conservation Congress.

Annex 1

List of Transfrontier Protected Areas Complexes

Note: Complexes may include proposed protected areas and areas designated under national legislation that have not been assigned an IUCN Category (i.e. unassigned), provided that there is at least one established protected area adjacent to another either side of an international boundary.

Countries	WCMC	Designated Areas	IUCN Category
NT AT A	Code		
North America	-	No. 10 LO D	li II
Canada/	612	Kluane National Park & Preserve	IV
	18707	Kluane Wildlife Sanctuary	l iv
	7406	Tatshenshini-Alsek Wilderness Park/	. "
US	13038	Tongass National Forest	íV
	1005	Wrangell-St Elias National Park	II
	35387	Wrangell-St Elias Wildemess Area	lb
	22490	Wrangell-St Elias National Preserve	V
	1010	Glacier Bay National Park	II
	22485	Glacier Bay National Preserve	V
	35382	Glacier Bay Wilderness Area	Ib
Canada/	626	Waterton Lakes National Park	II
	21193	Akamina Kishinena Provincial Park	II
		Flathead Provincial Forest Reserve/	
US	973	Glacier National Park	II
	100967	Flathead National Forest	VI
Canada/	100672	Ivvavik National Park	11
Canada	100673	Vuntut National Park	11
	101594	Old Crow Flats Special Management Area/	lb.
n .	2004	And National Wildlife Defers	iv
US	2904	Arctic National Wildlife Refuge Ouetico Wilderness Provincial Park	11
Canada/	66395		"
		Neguaguon Lake Indigenous Reserve/	
US	21322	Boundary Waters Canoe Area Wilderness Area	Ib
	100955	Superior National Forest	VI
_	988	Voyageurs National Park	II
Canada/	4185	Cathedral Provincial Park	II
	18646	E. C. Manning Provincial Park	II
*.	101678	Skagit Valley Recreation Area	II
	65159	Cultus Lake Provincial Park	11
		Neguaguon Lake Indigenous Reserve/	
	979	N. Cascades National Park	11
US	21389	Pasayten Wilderness National Forest	Ib
Marian	101431	Sierra de Maderas del Carmen National Park	
Mexico/	101457	Cañón de Santa Elena National Forest/	VI
US	976	Big Bend National Park	. 11
Mexico/	34862	Sierra de los Ajos National Park/	
US	100881	Coronado National Forest	
Mexico/	32971	El Pinacate y Gran Desierto de Altar National Biological Reserve	VI
	18091	Sierra del Pinacate Refugio	IV
	101409	Alto Golfo National Biological Reserve/	VI
110	13771	Cabeza Prieta National Wildlife Refuge	IV
US	35472	Cabeza Prieta Wildemess Area	Ib
	35977	Organ Pipe Cactus Wilderness Area	Ib
	1020	Organ Pipe Cactus Witatiness Fued Organ Pipe Cactus Wational Monument	III
	1020	Tohono O'odham Reservation	

Countries	WCMC Code	Designated Areas	IUCN Category
Latin America			
Belize/	20224	Rio Bravo Conservation Area Private Reserve	IV
	61957	Aguas Turbia National Park/	II
Guatemala/	26621	Maya Biosphere Reserve	n/a
	30604	Mirador -Río Azul National Park	Ia
	102817	Naachtún - Dos Lagunas Protected Biotope/	II
Mexico	19570	Calakmul Biological Reserve	VI
Belize/	20230	Chiquibul National Park	II
	3314	Columbia River Forest Reserve	VI
	116297	Vaca Forest Reserve	VI
	28850	Maya Mountains Forest Reserve/	VI
Guatemala		Complejo III - Reserva de Biosfera Montañas Mayas Chiquibul	
Costa Rica/	167	Tortuguero National Park	II
	30599	Tortuguero Protected Zone	VI
	12493	Barro del Colorado National Wildlife Reserve/	IV.
Nicaragua	30628	Río Indio-Maíz Biological Reserve	la
	20220	San Juan Delta	Pr
Colombia/	142	Los Katios National Park/	11
Panama	236	Darién National Park	11
	102255	Punta Patiño Nature Reserve	
Costa Rica/	2553	La Amistad National Park	II
	12491	Las Tablas Protected Zone/	VI
Panama	2552	La Amistad National Park	II
	17185	Palo Seco	VI
	102253	Lagunas de Volcán	IV
Costa Rica/	19402	Gandoca y Manzanillo National Wildife Refuge/	IV
Panama	16787	Isla Bastimentos Marine National Park	II
El Salvador/	9638	Montecristo National Park/	IV
Guatemala/	102815	Fratemidad o Trifinio National Biosphere Reserve/	n/a
Honduras	18804	Montecristo Trifinio National Park	n
El Salvador/	10007	Proposed/	Pr
Handring/	40996		· IV
Honduras/	40990	Río Negro Biological Reserve/	I.V
Nicaragua	12652	Estero Real Natural Reserve	II
Guatemala/		Lacandón National Park/	
Mexico	14305	Montes Azules Biological Reserve	la
	67671	Bonompak National Monument	III
Honduras/	41014	Río Plátano National Park	Pr
	41045	Tawasha Indigenous Reserve	
	41013 41034	Patuca National Park Río Coco Natural Monument/	. II Pr
Nicaragua	2650	Bosawas National Reserve	VI
Argentina/	15 61817	Iguazú National Park Iguazú Strict Nature Reserve/	II la
			//
Brazil/	60	Iguaçu National Park/	11
Paraguay		M.S. Bertoni	A
Argentina/	97490	Nahuel Huapi National Park	II
	97523	Nahuel Huapi Strict Nature Reserve/	Ib -
Chile	90	Puyehue National Park	_ II
	88	Vincente Perez Rosales National Park	11

Countries	WCMC Code	Designated Areas	IUCN Category
Argentina/	7	Lanín National Park	II
	61820	Lanin Strict Nature Reserve	la
	2497	Lanín Natural Monument	II
•	30844	Complejo Islote Lobos	IV
	16875	Chañy Forest Reserve/	VI
Chile	91	Villarrica National Park	II
	10706	Villarica National Reserve	IV
	9418	Huerqueque National Park	11
Argentina/	6	Los Glaciares National Park	II
	4329	Los Glaciares Strict Nature Reserve/	la
Chile	9414	Bernardo O'Higgins National Park	1 11
	89	Torres del Paine National Park	II
Argentina/	16873	Copahue -Caviahue Provincial Park/	11
Chile	111	Nuble Reseserva Nacional	IV
Bolivia/	20049	Iténez Reserva Fiscal/	VI
Brazil	5126 -	Guaporé Federal Biological Reserve	la
	41090	Baixo Sao Miguel State Extractive Forest	VI
	34028	Pedras Negras State Extractive Forest	VI
Bolivia/	36	Eduardo Avaroa National Reserve/	IV
Chile	94112	Liancabur National Park	II
	30043	Los Flamencos National Reserve	IV
Bolivia/	33	Sajama National Park	11
Donnie	20030	Sajama Integrated Management Area	
	20035	Altamachi Vicuña Reserve/	IV
CI I	000	Lauca National Park	11
Chile	86 9435	Las Vicuñas National Reserve	iv
Bolivia/	98183	Madidi National Park/	- · · · · · · · · · · · · · · · · · · ·
Peru	7460	Pampas de Heath National Sanctuary	III VI
Brazil/	101760	Tucumaque Forest Reserve/	VI
Suriname	276	Sipaliwini Nature Reserve	IV
Brazil/	54	Pico da Neblina National Park/	li
Venezuela	4367	Serranía de La Neblina National Park	II
Colombia/	9400	La Paya National Park/	II
Colonida			
Ecuador/	2499	Cuyabeño Reserva Faunistica/	. VI
Peru	98245	Guepi National Park	Un
Colombia/	144	Tamá Natural National Park/	11
.,	777	El Tomé National Body	11
Venezuela	322	El Tamá National Park Cerro Machado- El Silencio	VI
,	101129	San Antonio- Ureña Protected Zone	v
Colombia	30640 19993	Catatumbo-Bari National Park/	il v
Colombia/			
Venezuela	318	Perijá National Park	II
	20068	Región Lago de Maracaibo -Sierra de Peri Protected Zone	V
Ecuador/	186	Yasuni/	
Peru	249	Reserva Nacional Pacaya Samira	VI
Europe			
Albania/		Prespa Lake National Park/	
Greece/	674	Prespes National Park/	II
Former Yugoslav Republic of Macedonia	2516	Galichica National Park	11
	1056	Pelister National Park	11

Countries	WCMC Code	Designated Areas	IUCN Category
Austria/	102736 103578	Thayatal Protected Landscape Area Thayatal Nature Reserve/	V
		† '	
Czech Republic	30721	Podyjí National Park	II
	4280	Podyji Protected Landscape Area	V
	61419	Palava Protected Landscape Area	
Austria/	102002	Lainsitzniederung Strict Nature Reserve	v
	102882 5425	Blockheide Eibenstein Nature Park Blockheide Eibenstein Nature Reserve	v
	3423	Northern Waldviertel Area/	
Czech Republic	2558	Trebonsko Protected Landscape Area	V
Austria/		Bayerischer Wald, Böhmerwald, Sumava National Park/	Pr
Czech Republic/	4282	Šumava CHKO Protected Landscape Area	V
	26059	Šumava National Park	II
	26059	Sumaveská Raselinisté/	II
Germany	67870	Bayerischer Wald Nature Park Deïlanderregion	v
	64659	Böhmerwald Biosphere Reserve	- Pr
Austria/	31402	Kalkhochalpen Nature Reserve/	IV
Germany	688	Berchtesgaden National Park	II
Austria/	1218	Neusiedlersee Nature Reserve	IV
Ausura	62709	Neusiedlersee - Seewinkel National Park	11
	102857	Neusiedler See und Umgebung Protected Landscape Area/	V
I have a second	9566	Ferto Hansag National Park	n
Hungary	18769	Donau-Auen National Park	11
Austria/	31412	Donau-March Protected Landscape Area	v
	68341	Auen Protected Landscape Area	v
	1220	Marchaven-Marchegg NSG Nature Reserve	Un
	31408	Untere Marchauen Nature Reserve/	IV
Slovakia	19034	Slovakia Zahorie CHKO Protected Landscape Area	v
	12155	Male Karpaty Protected Landscape Area	V
Belarus/	1985	Belovezhskaya Puscha National Park/	II
Poland	854	Bialowieski National Park	II
Belarus/	1644	Pripiatsky National Park/	Ib
Ukraine	1749	Polessky Nature Reserve	la
Belgium/	18950	Hautes Fagnes Eifel Nature Park/	V
6	6971	Nordeifel Nature Park	· v
Germany Bosnia-Herzegovina/	1055	Sutjeska National Park/	<u>1</u> 1
Bosilia-Herzegovilla/			
Yugoslavia (Montenegro)	15596	Tara National Park	11
	1051	Durmitor National Park	II,
Croatia/	15605 15602	Kopacki Rit Special Reserve Kopacki Rit Nature Park/	la V
	13602	Ropacki Kit Nature Park	
Hungary	9683	Mohacsi Tortenelmi Emlekhely Nature Conservation Area	IV
	100798	Duna-Drava National Park	V
Czech Republic/	4275	Protected Landscape Area Labské Pískovce/	V
Germany	32666	Sächsische Schweiz National Park	V
	11800	Sächsische Schweiz Protected Landscape Area	V
Czech Republic/	645	Krkonoše National Park Protected Landscape Area Iser Mountains/	V
Poland	852	Karkonoski National Park	II
Czech Republic/	4267	Beskydy Protected Landscape Area/	V
Poland/	12270	Zywiecki Park Krajobrazowy/	v
		Protected Landscape Area Kysuce CHKO	v
Slovakia Czech Republic/	11812	Protected Landscape Area Kysuce CHKO Protected Landscape Area White Carpathians/	V
	_		
Slovakia	12159	Biele Karpaty Protected Landscape Area	V

Countries	WCMC	Designated Areas	IUCN Category
D	Code	Waddensea Nature Reserve	
Denmark/	92491		IV
	5762	Vadehavet Wildlife Reserve	V
	17703	Vadehavet Conservation Area	IV
	64575	Vadehavet National Nature Area/	
Germany/	4380	Rantumbecken Nature Reserve	IV
	1541	Nord-Sylt Nature Reserve	IV
	33391	Hosteinische Schweiz Nature Park	V
	32669	Schleswig-Holsteinisches Wattenmeer National Park	V
	11837	Niedersaohsisones Wattenmeer National Park	V
	30116	Dollart Nature Reserve	IV.
	82256	Nordfriesisches Wattenmeer Nature Reserve/	IV
Netherlands	64617	Dollard Nature Reserve	
	12754	Waddensea Area Biosphere Reserve	n/a
Finland/	654	Lemmenjoki National Park/	II
Norway	822	Ovre Annarjakka National Park	II II
Finland/	- 022	Kasiyarsi Wildemess Area/	
Norway	12297	Reisa National Park	li II
		Raisdoutterhaldi Protected Landscape Area	
Finland/		Vätsäri Wildemess Area/	
Norway/	832	Ovre Pasvik National Park & Reserve/	11
	(0.11)	D 9.77 1.71 1.71	In In
Russian Federation	62446	Pasvik Zapovednikovednik	la II
Finland/	656	Oulanka National Park/	II
Russian Federation	68351	Paanajärvi	II
Finland/	2561	Urho Kekkonen National Park/	IV
i iliaid			
Russian Federation	1700	Laplandskiy Zapovednik	Ia
Finland/		Friendship Nature Reserve, Kainou Park	
		Elimussalo Nature Reserve	
		Lehtua Nature Reserve	,_
	1523	Ulvinsalo Strict Nature Reserve	la
	102007	Juortansalo-Lapinuo Protected Mire	IV IV
	102041	Lososuo-Saarijarvi Protected Mire	1
		Iso-Palonen & Maariansarkat Nature Reserve/	
Russian Federation	13988	Kostomukskiy Zapovednik	la
Finland/	40928	Perameri National Park/	II
	20011	Managed de Austrianiana National Bods	Pr
Sweden	30811	Haparanda Archipelago National Park	IV
	1397 106872	Haparanda-Sandskar Nature Reserve Haparanda Skärgård National Park	, II
		Vosges du Nord Regional Nature Park/	V
France/	6307		
Germany	81245	Pfälzerwald Nature Park	
France/	661	Vanoise National Park	H
Italy	10350	Vanoise National Park Buffer Zone/	V
Italy	718	Gran Paradiso National Park	v
Empos/	664	Mercantour National Park/	!1
France/			
Italy	14618	Maritime Alps National Park	V
France/	662	Pyrenees Occidentales National Park	11
	703151	Pyrennes Occidentales National Park BZ/	
Spain	893	Ordessa y Monte Perdido National Park	11
Hungary/	13652	Aggtelék National Park/	11
			.,
Slovakia	4376	Slovenský Kras CHKO Protected Landscape Area	V
Hungary/	30853	Karanes-Madves Protected Area	1
	. 680	Bükki National Park/	II
Clavelrie	14146	Protected Landscape Area Cerová Vrchovina	V
Slovakia			

Countries	WCMC Code	Designated Areas	IUCN Category
Italy/	15346	Foresta Di Tarvisio Nature Reserve Regional Park Alpi Guilie/	· Un
Slovenia	2517	Triglavski National Park	11
Italy/	717	Stelvio National Park/	V
Switzerland	915	Suisse National Park	la
Lithuania/	31552	Kursiu Nerija National Park/	II II
•			, ,
Russian Federation	68348	Kurshaskayja Kosa National Park Mayroyo National Park/	II II
Former Yugoslav Republic of Macedonia/	1030	Mayrovo National Park	1 "
Yugoslavia (Serbia)		Shara Mountains National Park	
Norway/	829	Rago National Park Pr. Tysfjord Hellembotn National Park/	II
Sweden	905	Padjelanta National Park	II
	906	Sarek National Park	П
	3998	Stora Sjöfallet National Park	V Po-
	30818	Sjaunja Nature Reserve	Pr II
Norway/	826 9906	Femundsmarka National Park Femundsmarka Protected Landscape Area	v
	833	Gutulia National Park/	11
			IV
Sweden	10401	Rogen Nature Reserve Rogen-Langfjallet National Park	Pr
Nonvoy	30816 125857	Lundosneset Nature Reserve/	la
Norway/			
Sweden	30821	Tresticklan National Park	
Poland/	848	Tatrzanski National Park/	II
Slovakia	1975	Tatranský National Park	II
Poland/	106887	Babiogorski National Park/	ii
Clauskie	12160	Horná Orava CHKO Protected Landscape Area	v
Slovakia	14115	Babia Hora National Nature Reserve	Ia
Poland/	857	Pieninski National Park/	11
		Production of Post	' 11
Slovakia	851	Pieninski National Park Bieszcadski National Park	11
Poland/	631	Magura National Park	"
	67746	E. Carpathian - E Beskeid? Biosphere Reserve/	n/a
Slovakia/	67750	E. Carpathians Biosphere Reserve	n/a
Siovakia	12157	Vychodne Karpaty CHKO Protected Landscape Area/	V
Ukraine	1990 1745	Karpatskiy National Biosphere Reserve, Zapovednik Karpatskiy National Nature Park	la II
Portugal/	860	Peneda-Geres National Park/	11
Spain	71215	Baixa-Lima-Serra do Xures Natural Park	V n/a
Romania/	28791 31702	Danube Delta Biosphere Reserve Rosca-Buhaiova National Reserve	n/a la
	31702	Letea Nature Reserve/	la
Ukraine	4814 11150	Dunaiskie Plavni Nature Zapovednik. Cazanele Forest Reserve/	. Ia
Romania/		Cazarere Potest Reserve/	-
Yugoslavia	2522	Djerdap National Park	V
Africa			
Angola/	347 2251	Iona National Park Mocamedes Parital Reserve/	·VI
Namibia	885	Skeleton Coast Game Park	П
Angola/	4493	Mucusso National Park	IV IV
	,	Luiana Partial Reserve/	iv
Namibia/	7442	W. Caprivi Game Reserve/	VI
Zambia	30052	Mamili National Park	11

Countries	WCMC Code	Designated Areas	IUCN Category
Angola/	4493	Luiana Partial Reserve/	IV
Zambia	1087	Sioma Ngweze National Park	11
	4081	West Zambezi Game Management Area	VI
Benin/	597	Boucle de la Pendjari National Park	ll va
	2253	Pendjari Hunting Zone	VI VI
	2254	Atakora Hunting Zone/	V1
Burkina Faso	3228	Pama Partial Faunal Reserve	IV
	3226	Arly Total Faunal Reserve	IV
	9264	Arly Partial Faunal Reserve	IV IV
D:-/	12201	Kourtiagou Partial Faunal Reserve "W" du Benin National Park/	II II
Benin/	12201		
Burkina Faso/	1048	"W" du Burkina Faso National Park	II
	4488	Kourtiagou Partial Faunal Reserve/	IV
Niger	818	"W" du Niger National Park	п
Botswana/	7508	Gemsbok National Park/	II
		W. I. J. D. J. D. J. J.	l la
Namibia/	97586	Kalahari Private Reserve/	Un
South Africa	874	Kalahari Gemsbok National Park	II
Botswana/		Northern Tuli Game Reserve/	
South Africa/	21174	Vhembe-Dongola Nature Reserve/	iv
South Airica/	21174		
Zimbabwe	3059	Tuli Safari Area	VI
Burundi/	9161	Kibira National Park/	IV
Rwanda	9148	Nyungwe Forest Reserve	IV
Cameroon/		Lake Lobeke/	Pr
	21.450	B Allel Market Bade	II
Central African Republic/	31458 31459	Dzanga-Ndoki National Park Dzanga Sangha Forest Special Reserve/	VI
	31439	Dzanga Sangna Forest Special Reserve	
Republic of Congo	72332	Nouabalé Ndoki National Park	11
Cameroon/	20058	Korup National Park/	11
Nigeria	20299	Cross River National Park	l II
Central African Republic/	2261	Yata-Ngaya Faunal Reserve/	1V
		B. J. M. C. of Bridge	1 11
Sudan	5090	Radom National Park Mont Nimba Strict Nature Reserve/	Ia Ia
Côte d'Ivoire/	1295	Mont Nimoa Sinct Nature Reserve	10
Guinea/	29067	Mont Nimba Strict Nature Reserve/	Ia
	9176	E. Nimba National Forest	Un
Liberia	20175	W. Nimba National Forest	Un
Gambia/	2290	Niomi National Park/	li li
Canola			ıı ı
Senegal	866	Delta (Iles) du Saloum National Park	11
Guinea/	29069 29409	Badiar National Park Badiar-Sud Classified Forest/	Un
	29409		
Senegal	865	Niokola Koba National Park	II
Kenya/	1297	Maasai Mara National Park/	11
Tanzania	7437	Maswa Game Reserve	IV
3 to re-(11) (4	916	Serengeti National Park	II
	918	Ngorongoro Crater Conservation Area	VI
Kenya/	2417	Boni National Reserve/	VI
·	13715	Juba Left Controlled Hunting Area	Un
Somalia	872	Lag Badana National Park	Pr.
	13710	Bushbush Game Reserve	VI
	13714	Bushbush Controlled Hunting Area	
Kenya/	19564	Tsavo West National Park/	11
The state of the s	1402	Mkomazi Game Reserve	· IV
Tanzania	7433	Umba Game Reserve	iv
	1733	Ollow State Hosel to	

Countries	WCMC Code	Designated Areas	IUCN Category
Kenya/	758	Amboseli National Park	II
	7633	Loitokitok Forest Reserve/	Un
Tanzania	922	Kilimanjaro National Park	II
	31593	Kilimanjaro Game Reserve	IV
Kenya/	760	Mount Elgon National Park/	II
Uganda	9179	Sebei Controlled Hunting Area	VI
Malawi/	779	Nyika National Park/	II
Zambia	1102	Nyika National Park	·
Malawi/	4648	Vwaza Marsh Wildlife Reserve/	iV
Zambia	4102	Musalangu Game Management Area	VI
Malawi/	780	Kasungu National Park/	11
Zambia	1088	N Luangwa National Park	ıı i
	1086	S Luangwa National Park	11
	1100	Luambe National Park	11
	1091	Lukusuzi National Park	11
Mauritania/	9310	Diawling National Park/	П
Senegal ·	867	Djoudj National Park	п
	11653	Gueumbeul Special Faunal Reserve	IV
Mozambique/	4652	Maputo Game Reserve/	iV
South Africa/	116329	Ndumu Game Reserve	. 11
	39758	Tembe Elephant Park Reserve/	IV
Swaziland		Hlane National Park, Mlawula Nature Reserve	
Mozambique/	20295	Limpopo Valley Wildlife Utilization Area	VI
Triozamorque.	800	Zinhave National Park	11
	799	Banhine National Park/	II
South Africa/	873	Kruger National Park/	II
Zimbabwe	1104	Gonarezhou National Park	II
Namibia/	8785	Ai-Ais Hot Springs Game Park	II
		Fish River Canyon/	
South Africa	30851	Richtersveld National Park	II
Rwanda/	863	Volcans National Park/	II
Uganda/	18436	Mgahinga Gorilla National Park	11
•	18437	Bwindi Impenetrable Forest National Park/	11
Zaïre	1081	Virunga National Park	11
	20331	Rutshuru Hunting Zone	VI
Sudan/	904	Nimule National Park/	II
I learned	7933/	Otze- Dufile Wildlife Sanctuary	IV
Uganda	31275 64700	Otze Forest Forest Reserve	Un
	3276	Mount Kei White Rhino Sanctuary	iv
Sudan/	1369	Kidepo Game Reserve/	VI
Uganda	958	Kidepo Valley National Park	II
Sudan/	10737	Lantoto National Park/	Pr.
Democratic Republic of the Congo (Zaïre)	1083	Garamba National Park	II
Democratic republic of the Congo (Zaite)	20036	Mondo Misso Hunting Zone	VI
Uganda/	18438	Rwenzori Mountains	II -
	9184	Semliki Controlled Hunting Area	VI
	1446	Kyambura Game Reserve/	II
Zaïre	1081	Virunga National Park	IV

Countries	WCMC Code	Designated Areas	IUCN Category
Zambia/	7692	Lower Zambezi National Park/	II
Zimbabwe	2531	Mana Pools National Park	11
	2524	Charara Safari Area	VI
		Sapi, Chewore, Dande Special Areas	VI
Zambia/	2347	Mosi-oa-Tunya National Park	111
	62183	Victoria Falls National Monument/	III
Zimbabwe	1993	Victoria Falls National Park	III
	2530	Zambezi National Park	11
Asia			
Bangladesh/	4478	Sundarbans W. Wildlife Sanctuary/	IV
India	9960	Sundarbans National Park/	Ia
Bhutan/	7996	Royal Manas/	11
			13.4
India	1818 9232	Manas Sanctuary Buxa Sanctuary	IV IV
	62663	Buxa National Park	Un
Brunei Darussalam/	39641	Labi Hills	la
	18035	Labi Hills	v
		Labi Hills/	· Un
Malaysia	3790	Gading Forest Reserve	
(remark) SIG	3939	Gunung Gading National Park	11
Brunei Darussalam/	32948	Sungei Ingei Conservation Area	la
	3937	Ensengi Forest Reserve/	Un
Malaysia	787	Gunung Mulu National Park	11
Cambodia/	12249	Preh Vihear Protected Landscape/	V
77 1 1		Yot Dom	
Thailand	1415	Phanom Dong Rak Wildlife Sanctuary	iv
Cambodia/	68862	Virachey National Park/	II.
			177
Laos/	18872	Dong Ampham Nature Reserve Nam Kong Nature Reserve	VI Pr
		Altopeu/	Pr
Viet Nam	12171	Mom Ray Nature Reserve	IV IV
China/	95461 95460	Jingpo Lake Nature Reserve Mudan Peak Nature Reserve	II VI
	96016	Changbai Mountains Biosphere Reserve/	n/a
		·	
N. Korea/	17908	Paekdu Mountain Nature Protection Area/	IV
Russian Federation	1726	Kedrovaya Pad Zapovednik	la
China/	96064	Dalai Lake Nature Reserve/	lV
Mangalia/	93538	Mongul Daguur Strict Protected Area/	Ib
Mongolia/	93336		100
Russian Federation	62684	Daurskiy Zapovednik	la
China (Tibet)/	95785	Zhu Feng Nature Reserve Jiang Cun Nature Reserve/	lb VI
	95784	·	
Nepal	804	Sagarmatha National Park	II
	803	Langtang National Park	II II
	26606 26605	Makalu-Barun National Park Makalu-Barun Conservation Area	II IV
China/	96118	Ta Shi Ku Er Gan Nature Reserve/	lb lb
China/			
Pakistan	. 836	Khunjerab National Park	li Va
China/	95476	Xing Kai Lake Nature Reserve/	VI
Russian Federation	62691	Khankaiskiy Zapovednik.	Ia

Countries	WCMC	Designated Areas	IUCN Category
	Code		
China/		Hunhe Nature Reserve	
	95471	Hong River Nature Reserve/	VI
Russian Federation	1715	Bol'shekhekhtsizskiy Zapovednik	la
China (Guangxi)/	. 95872	Gu Long Mountain Shui Yuan Lin	VI
, , ,	95618	Xia Lei Shui Yuan Lin Nature Reserve/	VI
Viet Nam	10360	Trungkhanh	IV
China/	99776	Guan Yin Mountain Nature Reserve	
	95742	Fen Shui Ling Peak Nature Reserve/	VI .
Viet Nam	10357	Hoang Lien Son #2	IV
India/	1807	Katarniaghat Sanctuary	IV
	691	Dhudhwa National Park/	11
Nepal	1308	Royal Bardia National Park	II
India/	4578	Valmiki Sanctuary	IV
	12414	Sohagibarwa Sanctuary	IV
	4543	Udaipur Sanctuary/	1V
Nepal	805	Royal Chitwan National Park	II
India/	19683	Kachchh Desert Sanctuary/	IV
Pakistan	6684	Rann of Kutch Wildlife Sanctuary	IV
Indonesia (Kalimantan)/	8673	Gunung Bentang Karimum National Park/	11
Malaysia (Sarawak)	1300	Lanjak Entimau Wildlife Sanctuary	IV
	12250	Batang Ai National Park	II
Indonesia/	29966	Wasur National Park/	II
Papua New Guinea	4200	Tonda Wildlife Management Area	VI
	4202	Maza Wildlife Management Area	VI
Kyrgyz Republic/	1675	Besharalsky Zapovednik./	· la
Uzbekistan	1761	Ugam-Chatkal National Park	la
Laos/	18893	Phou Xiang Thong National biodiversity Conservation Area/	VI
Thailand	39518	Pha Tam National Park	п
	4674	Kaeng Tana	П
Laos/	61496	Nam Et National Biodiversity Conservation Area/	VI
Viet Nam	10363	Sop Cop Nature Reserve	IV
Laos/	12182	Phou Dene Dinh National Biodiversity Conservation Area/	VI
Viet Nam	10362	Muong Nhe Nature Reserve	IV
Malaysia (Sabah)/	793	Pulau Penya Park/	11
Philippines	14758	Turtle Island Marine Sanctuary	IV
Mongolia/	93566	Uvs Nuur Basin Strict Protected Area/	, la
Russia	67722	Ubsunurskaya Kotlovina	Ia
Mongolia/	93579	Khovsgul Nuur National C Park/	II
Russia	68356	Turkinskiy National Park	l u

Key to IUCN category field:

Pr proposed protected area

n/a not applicable (as in the case of internationally designated sites, such as biosphere reserves)

Un unassigned (not assigned to a category because the designation/site does not meet IUCN's definition of a

protected area)

blank category not yet assigned (often due to inadequate information)

